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ABSTRACT

The computer can improve writing instruction only if it is integrated into a systematic pedagogy that distinguishes between writing behavior and higher order cognitive skills. Underlying the present concern with the writing process is the behaviorist assumption that promoting a certain writing behavior can provoke thought. Unfortunately, while computers can change writing behavior--causing students to revise more, for example--they cannot change student writing. Teachers may contribute to problems with using computers or word processors in writing when they quickly criticize technical problems or are unable to adjust their teaching to technical innovations. Educators need to set limits on how useful they want computers to become in instruction. Invention, for example, should be left to pencil and paper both because most computer programs are only mimicking classroom pedagogy and because computerized invention programs do not allow for serendipity. If the computer is left to help with more mechanical writing problems, instructors will be freed to help students develop higher level cognitive skills. (MM)

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

WILL COMPUTERS LIBERATE THE COMP DRUDGE?

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I hope my title is provocative enough. I intended it to be. After all, who would label himself a comp drudge after the revolution in composition pedagogy we've witnessed over the last decade. I'm talking about the shift from the old paradigm to the new one. According to the old conception, the writing process consisted of a fixed series of steps which gradually revealed, in as correct a form as possible, the ideas already immanent in the writer's mind when he started. The process gave shape to what was there at the outset--the Think Before You Write approach, as I called it in another paper.

Nowadays, though, when we speak about the writing process, we tell students that it's okay if they get new (and often better) ideas as they write draft after draft. Outlines? In the past they were the skeleton that supported the writer's exposition; now they are a heuristic tool to find ideas or to test organization.

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As for error, well. we just don't talk about error any more, right? (The Write Before You Think Approach, in other words.)

But my real subject today is what we might call the politics of innovation, the obstacles we encounter when we try to make any change in academe, especially changes which affect the way our colleagues teach. I want to talk also about the mismatch between the expectations raised by a theory and the actual results. If I am arguing anything at all, I am arguing that the computer revolution in writing classes may be dead before it really gets underway unless we carefully restrict our aims to what we know computers can actually do for us and our students. In the end, I am saying that the computer may liberate the comp drudge if it is integrated into a systematic pedagogy which distinguishes between writing <u>behavior</u> (which computers may help our students acquire) and higher-order cognitive skills.

We've all read the predications that, sooner or later--and probably sooner--everybody will be doing their writing on computers. I'm writing this paper on a computer in my den. I'll send it by phone to my university's computer. Later on I'll print it when I get to campus. You'll hear similar stories throughout the day, I'm sure. If I wanted to, I could crank this

text through a battery of style checkers I put together for the WRITER program at Ohio Wesleyan. I could get the computer to check my spelling too. All this . . . available today for about $1000 less than I paid two years ago. But the point is, I already know how to write. In fact, I'm not going to run this through the style checker because I'm sophisticated enough as a writer to know exactly what kind of style I am aiming at.

But my students don't. They also don't know what they want to write or how to go about the process. I've become aware over the last few years of how limited our conception of the writing process really is, despite all the ballyhoo about process, process, process. Actually, we are teaching writing behavior, not writing. There is, we assume, some link between that process and cognitive development, but we can't define the connection . What we settle for, therefore, is a series of behaviors which we know from experience may provoke thought. The ideas come, although we don't know from where. The behaviorist assumptions behind the process approach are quite striking. They affect the way we conduct our classes--they are places where we hope to make writing happen. They turn up in the literature--for instance in Nancy Sommers's often-quoted research reports on the revision process in which she compares writing behaviors, not writing.

Now, I expect many of you may object to this characterization of the writing process. Behaviorism is a dirty word these days. But it seems clear to me that behaviorist assumptions underlie most versions of the process approach.

As for my own views, I have no problem with a behaviorist approach, provided that we recognize its limitations. It cannot create content. It may not hone cognitive skills unless it is adapted to a pedagogy that is structured upon some model of cognitive processes--e.g. the ADAPT program at the University of Nebraska, which is modeled on Piaget's theory.

I'll go even further--and get back to computers at the same time. Computers are really good at changing writing behaviors. They are not much good for anything else. I don't know of any published study which claims that students who write on computers are better writers than those who don't. Most of the studies published thus far confirm my own finding at Ohio Wesleyan that students who are competent writers to begin with still produce competent papers when they write them using OWU's WRITER program. And students who are poor writers to begin with produce poor papers whether or not they use the computer. What has changed, however, is their writing behavior. They revise more frequently on the computer than off. This, incidentally, has had a positive effect on students who don't use the computer.

When they see other students turning in draft after draft, they feel they have to work equally hard.

Computers can mimic intelligence, but they aren't intelligent. Still, many of our students and colleagues have exaggerated notions about their powers. This can cause problems for instructors who want to use computers in the writing class. First, you may find, as I did, that your colleagues are all too eager to see you succeed, but become disillusioned just as quickly. English teachers aren't Luddites. That may be the problem. Because they have never had to deal with technology in their professional pursuits, they embrace the new technology all too quickly, provided somebody else is around who understands it. Yet as I've discovered, computer-written papers are such a novelty that my colleagues pay special attention to their failings. Also, computers have created a whole new category of excuses. Where's your paper? I couldn't get on a terminal or It disappeared or The printer was hung.

Colleagues outside of the English Department can create other difficulties. For example, at OWU the WRITER program automatically prints a neatly formatted paper on the main high-speed line printer. It uses wide, green-bar paper, and sometimes the ribbon gets a bit too old. So now and then I get calls from faculty complaining about these problems. They fuss and fume to

me and the students about good old 20 pound white bond, good old carbon film ribbons. I try to tell them that many of the students who turn in the offending green-bar paper would probably have handwritten it otherwise--on good old, spiral notebook paper, with the decorative confetti border. At that point my caller usually hangs up and writes a nasty note to the dean.

These are just two obstacles. We may characterize them by saying that our colleagues expect too much from computers and the students who are daring enough to use them to write papers. They disregard the fact that it takes time for students to learn how to use the text editor efficiently, for example. More importantly, they don't see how word processing may force them to alter the way they teach or what they teach. Oddly enough, they exaggerate the capabilities of the machine while they downgrade it by regarding it as a souped-up typewriter.

If we look ahead to a computer revolution in the writing class, it is this contradictory attitude that poses the most problems for innovators who are trying to persuade their colleagues to explore with them the implications for teaching of this new technology. Beyond this, however, the same contradictory attitude may affect the thinking of those who are doing the innovating. As I said, computers are awfully stupid. They really are. That's what makes them so maddening when you try to find ways to use them in the classroom.

After all, sometimes our students are not much brighter, unfortunately, and so we have to spend time--too much time--explaining things which seem obvious--as well as unrelated to any pedagogical purpose. For instance, the WRITER manual explains repeatedly that the symbol <RETURN> means "press the RETURN key." I had a student call me at home complaining that he couldn't get into the WRITER program. What did he do? He typed in the command WRT followed by bracket-R-E-T-U-R-N-bracket. Oh well.

The computer user's solution to this problem is to expect that an even newer technology will solve these and other problems. The next generation of computers, we predict, will reach out, grab that student's hand, and guide his finger to the RETURN key. Maybe not. But we keep expecting computers to get smarter. The consequence of this assumption, however, is that we who are closely involved with computer projects end up deluding ourselves about their capabilities.

I'd like to suggest that we limit our claims about the usefulness of computers, not just because the currently-available technology imposes limitations, but also because we ought to set definite limits on how useful we wish them to become. I stated that the process approach rests on behaviorist assumptions. Many writers have urged that the computer is ideally suited to the process approach. And it is. Revisions? A snap.

Editing and clean-up? No problem. But they cannot do much more than this. Nor should we expect them to do much more. Instead of developing increasingly complicated and comprehensive programs for use in writing classes, we ought to be working on a classroom pedagogy that fosters the development of higher writing skills. Invention, for example, ought to be left to pencil and paper, not to the computer because, first, most of the invention programs I've seen or heard of simply adapt techniques instructors have used for years (such as the journalist's questions). The question is whether the computer is necessary to carry out an assignment like this. If it does not provide a clear-cut advantage, why do it on computer? Second, the more sophisticated, interactive invention programs are limited by the semantic idiot within the machine. What good is a program that may end up confusing a novice writer? Finally, computerized invention programs don't allow for serendipity, the idea that sneaks up on you from the far side of your brain. Invention programs, of course, are not the only example of excessive technophilia.

What I am saying, finally, is that computers can liberate the comp drudge if we divide our labors between man and machine. If we admit that much of what we do when we write is sheer drudgery, then we can use computers to help develop appropriate behaviors, especially because computers make that drudgery so much

easier. But if we want to affirm that writing involves higher-order skills and that writing is uniquely able to develop those skills, we must move toward a pedagogy that foregrounds those skills. As I've said elsewhere, let the machine handle what is merely mechanical. The comp drudge will be liberated when this division of labor allows him (or her) to teach writing instead of serving as a copy editor to the unlettered.

If you think about it, computers may make it possible for us to go back to rhetoric for the first time since writing was invented. Many of you remember the end of the Phaedrus, where Socrates, after a glorious display of rhetoric, wonders whether the new-found art of writing will destroy the art of rhetoric. Men who can write don't have to exercise their memories very much, he reasons, and as the art of memory becomes obsolete, so do the values and customs hitherto preserved by memory alone. Socrates was right about this, but he didn't anticipate that with the advent of writing, rhetoric slowly dwindled to grammar and grammar slowly dwindled to correctness and so on in a long line that crashes to a halt in the Harbrace Handbook. If we use computers carefully, recognizing the distinction between the kinds of lower-level skills they can teach and the higher-order operations that become possible when human minds confront each other, we may recover a bit of what we lost.